

## CHARACTERISTICS OF INFRARED COMMUNICATIONS SYSTEMS

00152

TYPE	TOTAL WEIGHT (equip. plus power)	RANGE IN MILES (average clear weather)	BEAM WIDTH	TYPE OF MODULATION	EQUIPMENT STATUS	LIFE (hours)	DETECTOR TYPE	FOCUSING SYSTEM	FILTER TYPE	SOURCE OF RADIATION
Signal Corps Optiphone AN/TVC-1	100 + 45 = 145	5-7	1/3 degree	Scophony Cell Modulation (Quartz crystal exciting a liquid lens system)	Built in 1944	10	JAN-918 Photocell	lens system	Wratten 88A	2 amp. 5 volt tungsten lamp
RCA Optiphone (Aural Signal Lamp Equip.)	37 + 12 = 49	2-3	1 degree	Mechanical (Moving mirror galvanometer)	Built in 1945 for Signal Corps	7	RCA-921 Photocell	lens system	Wratten 88A	2 amp. 5 volt tungsten lamp
NDRC Type "W"	8 + 10 = 18	3	5 degrees	?	Navy Contract at Northwestern Univ. 1950-1951	1	?	?	?	?
E.R.A. Proposal to the Agency dtd Nov. 1948	"Easily carried by one man"	1 mile minimum in adverse weather	approx. 1 degree	Current Modulation of Concentrated Arc Lamp	No action taken	?	Lead Sulphide Cell	Spherical Reflectors (Metallic)	?	2 watt Concentrated Arc Lamp developed by the Western Union Research Laboratories
German Model Li 50/60	30	3	1/4 degree	?	World War 2 Vintage	?	?	?	?	?
German Model Li 250/130	110	9	1/3 degree	?	World War 2 Vintage	?	?	?	?	?
German Model Li-Spr-80	approx. 55	4	1/6 degree	Variation of the airgap between two prisms of different indices of refraction alternately producing reflection and transmittance.	World War 2 Vintage	approx. 10	?	lens system	?	?
AN/PAR-1	Portable, aural, operates in 0.8 to 2.0 micron band; Can be used with AN/PAC-1; expected availability March 1952.									
AN/PAR-2	Demolition homing device for attachment to swimmer's helmet. 0.8 to 2.0 micron band; Availability June 1952.									
AN/PAC-1	Similar to Navy Type "W"; portable hand carried transceiver to be operated with AN/PAR-1 or AN/SAC-1; availability June 1952.									
AN/SAC-1	Shipborne transmitter-receiver intended for night use. Availability August 1952.									
AN/SAR-1	I-R telescope to detect beacon signals; 0.7 to 1.0 micron range. Availability August 1952.				Investigation Proposed in December 1951	?	?	?	?	?
Recent Agency proposal to Baird Associates December 1951	20 + 20 = 40	approx. 4-5 (1 mile min. in bad weather)	2 degrees max.	?						

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